NATIONAL MARROW DONOR PROGRAM®

Entrusted to operate the C.W. Bill Young Cell Transplantation Program,
including Be The Match Registry®

April 29, 2011

CDR Sheri Parker
Office of Naval Research (ONR 342)
875 N. Randolph St.
Arlington, VA 22203-1995

Subject: **Quarterly Performance/Technical Report of the National Marrow Donor Program®**

Reference: Grant Award #N00014-10-1-0204 between the Office of Naval Research and the National Marrow Donor Program

Dear Cdr. Parker:

Enclosed is subject document which provides the performance activity for each statement of work task item of the above reference for the period of January 1, 2011 to March 31, 2011.

Should you have any questions as to the scientific content of the tasks and the performance activity of this progress report, you may contact our Chief Medical Officer – Dennis L Confer, MD directly at 612-362-3425.

With this submittal of the quarterly progress report, the National Marrow Donor Program has satisfied the reporting requirements of the above reference for quarterly documentation. Other such quarterly documentation has been previously submitted under separate cover.

Please direct any questions pertaining to the cooperative agreement to my attention at 612-362-3403 or at cabler@nmdp.org.

Sincerely,

Carla Abler-Erickson

Carla Abler-Erickson, MA
Sr. Contracts Representative

Enclosure: Quarterly Report with SF298

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14. ABSTRACT

1. Contingency Prepardness: Collect information from transplant centers, build awareness of the Transplant Center Contingency Planning Committee and educate the transplant community about the critical importance of establishing a nationwide contingency response plan.

2. Rapid Identification of Matched Donors : Increase operational efficiencies that accelerate the search process and increase patient access are key to preparedness in a contingency event.

3. Immunogenetic Studies: Increase understanding of the immunologic factors important in HSC transplantation.

4. Clinical Research in Transplantation: Create a platform that facilitates multicenter collaboration and data management.

15. SUBJECT TERMS
Research in HLA Typing, Hematopoietic Stem Cell Transplantation and Clinical Studies to Improve Outcomes

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NATIONAL MARROW DONOR PROGRAM®

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Grant Award N00014-10-1-0204

QUARTERLY
PERFORMANCE / TECHNICAL REPORT
FOR
JANUARY 01, 2011 to MARCH 31, 2011
PERIOD 4

Office of Naval Research

And

The National Marrow Donor Program
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QUARTER PROGRESS REPORT

Development of Medical Technology for Contingency Response to Marrow Toxic Agents

January 01, 2011 through March 31, 2011

TABLE OF CONTENTS

IIA. Contingency Preparedness – Objective 1: Recovery of casualties with significant myelosuppression following radiation or chemical exposure is optimal when care plans are designed and implemented by transplant physicians	
IIA.1 Task 1: Secure Interest of Transplant Physicians	**Period 4 Activity:** • Began coordination of Advanced Medical Radiation Response training to be held at the Radiation Emergency Assistance Center and Training Site in Oakridge, TN. Two sessions will be held, the first in July and the second in October.
IIA.1 Task 2: GCSF in Radiation Exposure	**Period 4 Activity:** • No activity this quarter.
IIA.1 Task 3: Patient Assessment Guidelines and System Enhancements	**Period 4 Activity:** • No activity this quarter.
IIA 1 Task 4: National Data Collection Model – This task is closed.	
IIA. Contingency Preparedness – Objective 2: Coordination of the care of casualties who will require hematopoietic support will be essential in a contingency situation.	
IIA.2 Task 1: Contingency Response Network	**Period 4 Activity:** • Finalized 2011 RITN documentation and began the distribution to RITN centers for task accomplishment, each year RITN centers are asked to accomplish a set of tasks to maintain or improve their level of preparedness. Documents released include o 2011 RITN Task Memorandum o 2011 RITN Tabletop Exercise o Implementation of Basic Radiation Training into a new instance of iLinc software; previously the license was maintained by a different department. They are transitioning to a new software platform for training and competence testing. Until this new system is fully implemented RITN will now maintain its own testing license with the web testing tool iLinc.

- Finalized the checklists and solicited RITN centers to volunteer for a site assessment; resulting in 12 centers agreeing to be evaluated against the preparedness checklists.
- Tasks for 2011 include:

TASK SUMMARY TABLE:

	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Grant
	Contact	SOP	Tabletop	Commo.	Overview	Educate	Site Eval.	REAC/TS Training of MD	
TC	Yes	Yes	Yes	Yes	Yes	6, 7 or 8	6, 7 or 8	6, 7 or 8	$8,000
DC	Yes	Yes	No	Yes	5 or 6	5 or 6	No	No	$2,000
CBB	Yes	Yes	No	Yes	5 or 6	5 or 6	No	No	$2,000

  - Description of tasks:
    - Contact: each center will update contact information for three staff affiliated with RITN, this information is maintained by RITN and distributed to participating centers.
    - SOP: centers will update their RITN standard operating procedure.
    - Tabletop: conduct an RITN provided tabletop exercise; where centers have key staff discuss how their institution would respond to a disaster scenario.
    - Commo.: conduct GETS and satellite telephone tests when asked to by RITN.
    - Overview: conduct an overview presentation to an appropriate emergency preparedness or response organization to inform about RITN.
    - Educate: educate staff about radiation, acute radiation syndrome and treatment methods.
    - Site Eval: participate in a site assessment of preparedness activities.
    - REAC/TS Training of MD: send a physician to Oakridge for training at REAC/TS.

- Initiated the expansion of RITN by as many as 15 new transplant centers; to identify likely candidates NMDP transplant centers that are also members of the National Disaster Medical System were invited to join RITN.
- Implemented HealthCare Standard (HCS) as the new crisis management tool to replace WebEOC. This involved the recreation of the RITN Capabilities Report in HCS as well as the development and execution of training of RITN center staff on how to use the new system.
    - Conducted three Web based training sessions for RITN center staff, attended by 73 members.
    - DVD copy of recording of the session was mailed to the centers that were unable to have a staff member attend one of these sessions.
- Conducted a test of satellite telephones issued to RITN centers, 75% of the 52 issued satellite telephones were successfully tested by the center it was issued to.
- Monitored the Fukushima Nuclear Power Plant incident in Japan and sent a daily situation report to all RITN centers and RITN partners.
- In connection to the incident in Japan many radiological or nuclear disaster articles written; some of these referenced RITN or quoted RITN Executive Committee members or staff from RITN centers:
    - 4/15/2011-Should Japan Bank Stem Cells From Fukushima Nuclear Workers?, Science, Accessed 4/18/2011, http://news.sciencemag.org/scienceinsider/2011/04/should-japan-bank-stem-cells.html?ref=hp (Weinstock-RITN Med. Advisor, Chao-RITN Exec. Cmte)
    - 4/10/2011-Transplants for Thousands, New York Times, Accessed 4/15/2011, http://www.nytimes.com/2011/04/11/opinion/lweb11marrow.html (Chell-NMDP CEO)
        - In response to the 4/1/2011 article New Urgency in Push for Radiation Drugs http://www.nytimes.com/2011/04/01/business/01radiation.html?_r=1
    - 3/29/2011-Amid Japan crisis, hunt for better radiation care, Associated Press, Accessed 4/18/2011,

	http://www.google.com/hostednews/ap/article/ALeqM5gWg0vQLaVibv2GDZ9Hs5JVYQ91ug?docId=eaa41e50848a410c8de9b81c4e646118 (Chao-RITN Exec. Cmte) o 3/17/2011-As Radiation Drifts Toward U.S., Officials Downplay Risk, San Gabriel Valley Tribune, Accessed 3/18/2011, http://www.sgvtribune.com/news/ci_17638624?IADID=Search-www.sgvtribune.com-www.sgvtribune.com (Chuck Pickering-COH, LA) o 3/17/2011-Little Protection for Those on the Front Lines, Science, Accessed 3/18/2011, http://news.sciencemag.org/scienceinsider/2011/03/little-protection-for-those-on-t.html?ref=hp (Weinstock-RITN Med. Advisor, Chao-RITN Exec. Cmte) o 3/15/2011- Experts plan for how to deal with nuclear terror strike, USA Today, Accessed 3/17/2011, http://www.usatoday.com/news/nation/2011-03-15-nukemed14_ST_N.htm?loc=interstitialskip (Weinstock-RITN Med. Advisor) • Updated the map of RITN centers for publication on RITN.net • Updated various materials on RITN.net.
IIA.2.2 Task 2: Sibling Typing Standard Operating Procedures	**Period 4 Activity:** • NMDP staff met to discuss the next steps to potentially incorporate related donor typing into NMDP systems. Next steps are dependent on further development of the Phoenix Project to determine appropriate integration points.
IIA. Contingency Preparedness – Objective 3: NMDP's critical information technology infrastructure must remain operational during contingency situations that directly affect the Coordinating Center.	
IIA.3 Task 1: I.S. Disaster Recovery	**Period 4 Activity:** • No activity this quarter.
IIA.3 Task 2: Critical Facility and Staff Related Functions	**Period 4 Activity:** • Conducted a Business Continuity Plan (BCP) and Disaster Recovery (DR) plan walkthrough with appropriate staff. During this discussion the steps of response were discussed by BCP and DR staff and gaps were identified. A summary memorandum of issues identified is being prepared for

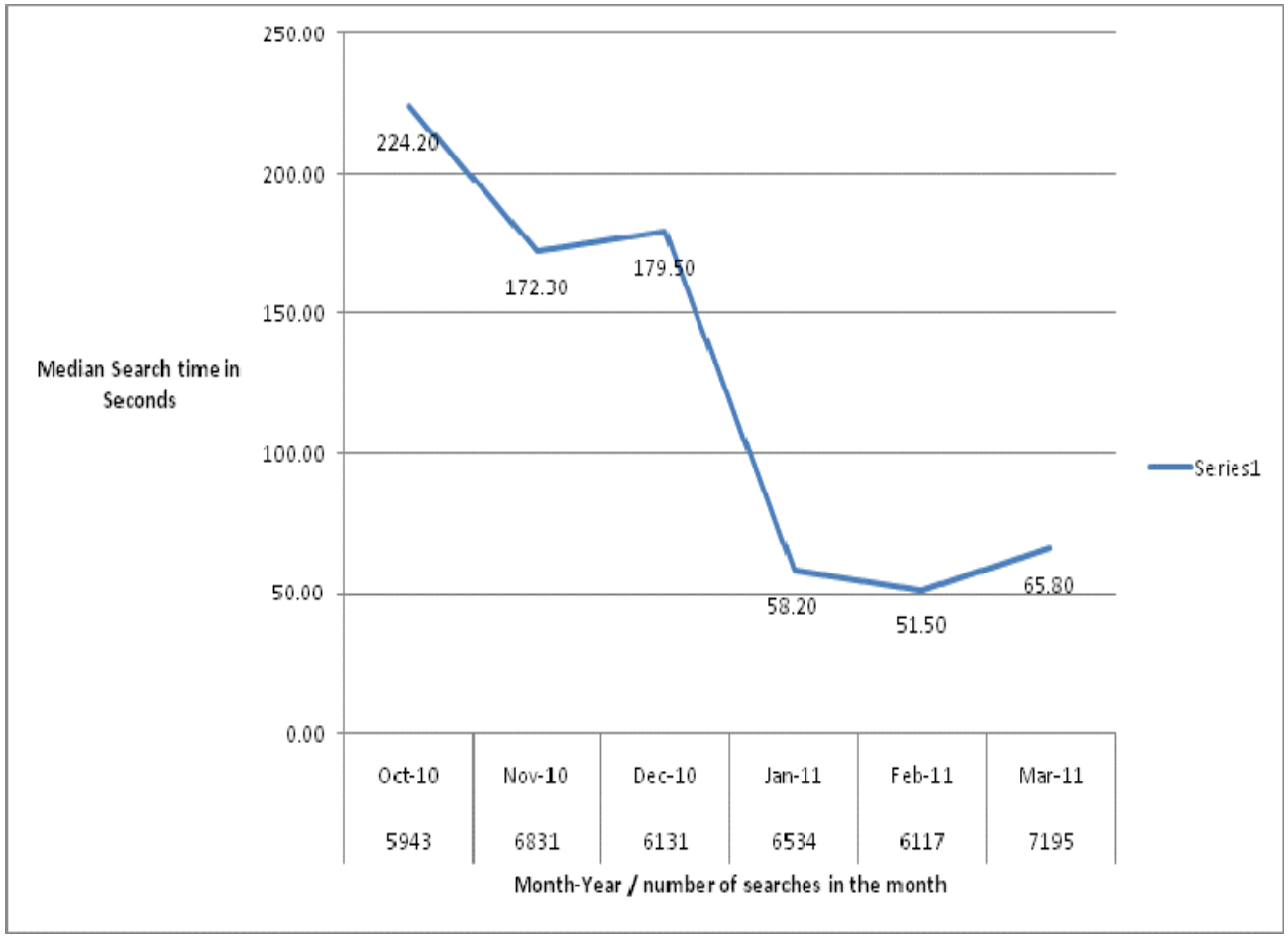
	review and determination of future projects to close these gaps. • Began preparing Business Continuity Plan Exercise 2011 (BCPeX 2011); this exercise will test the set up and configuration of equipment necessary for NMDP staff to operate remotely and then place NMDP staff at an alternate location to test the ability to perform critical tasks from the remote location. • Initiated the update of the Business Continuity Plan, review and update of critical tasks list and verification of associated staff assigned to each critical task.
IIB. Rapid Identification of Matched Donors – Objective 1: Increasing the resolution and quality of the HLA testing of volunteers on the registry will speed donor selection.	
IIB.1 Task 1: Increase Registry Diversity	**Period 4 Activity:** During the quarter, NMDP staff continued to manage and fine-tune the process that was implemented to strategically enhance the donor recruitment typing program through optimal use of NMDP contracted labs. The strategy preferentially targets younger and minority donors to laboratories providing higher resolution typing and/or include HLA-C. In addition, work continued on HLA discrepancy resolution and registry file maintenance and analysis. A poster abstract was submitted and accepted for the European Federation of Immunogenetics (EFI) meeting in May 2011.
IIB.1 Task 2: Evaluate HLA-DRB1 High Res typing – This task is closed.	
IIB.1 Task 3: Evaluate HLA-C Typing of Donors – This task is closed.	
IIB.1 Task 4: Evaluate Buccal Swabs	**Period 4 Activity:** • No activity this quarter.
IIB 1 Task 5: Enhancing HLA Data for Selected Donors	**Period 4 Activity:** • No activity this quarter.
IIB 1 Task 6: Maintain a Quality Control Program – This task is closed.	

IIB. Rapid Identification of Matched Donors – Objective 2: Primary DNA typing data can be used within the registry to improve the quality and resolution of volunteer donor HLA assignments.	
IIB 2 Task 1: Collection of Primary Data	**Period 4 Activity:** • No activity this quarter.
IIB 2 Task 2: Validation of Logic of Primary Data – This task is closed.	
IIB 2 Task 3: Reinterpretation of Primary Data – This task is closed.	
IIB 2 Task 4: Genotype Lists & Matching Algorithm	**Period 4 Activity:** • Completed operationalizing code developed to interpret incoming SBT typings and process version 3 nomenclature on incoming typings. • Code moved to production on March 30th, 2011.
IIB. Rapid Identification of Matched Donors – Objective 3: Registry data on HLA allele and haplotype frequencies and on the nuances of HLA typing can be used to design computer algorithms to predict the best matched donor.	
IIB.3 Task 1: Phase I of EM Haplotype Logic	**Period 4 Activity:** **Bioinformatics:** Continued development of Haplogic III. • Developed file harness for HapLogic III testing and validation. • Compiled a validation dataset of 58,000 patient-directed typing requests (2000-2008). The validation dataset will be used to evaluate the accuracy, sensitivity/specificity, positive predictive value/negative predictive value for HapLogic III for the 5 single-locus predictions (HLA-A, B, C, DRB1 and DQB1) and the x/10, x/8 and x/6 overall predictions. This same set is being evaluated using the existing HapLogic-II algorithm (which uses earlier HLA haplotype frequencies and has fewer outputs) to directly measure the improvement achieved with the enhanced HapLogic III algorithm and haplotype frequencies.

IT:

By implementing the foundational platform changes to the matching algorithm, the following gains have been realized during this reporting period:

- Improved performance



IIB 3 Task 2: Enhancement of EM Algorithm	**Period 4 Activity:** • Developed a new method for calculating DRB3/4/5 haplotype frequencies, including gene absence, as long as DRB3/4/5 typing intent is known. • Calculated 6-locus A~C~B~DRB3/4/5~DRB1~DQB1 haplotype frequencies for HapLogic III evaluation. In contrast to previous version of the algorithm, this approach combines all loci into one set of frequencies.. • Calculated BMDW A~B~DRB1 haplotype frequencies by country. An abstract was accepted for the European Federation for Immunogenetics (EFI) meeting on these frequencies.
IIB 3 Task 3: Optimal Registry Size Analysis	**Period 4 Activity:** • Calculated HLA match rates for end of year 2010, with several bug fixes implemented including proper handling of search determinant equivalency in the model. Match rates now have better alignment with BMCC Benchmark in cross-validation. Several more sources of error were outlined. • Calculated historical NMDP match rates back to the inception of the registry. • Developed a draft manuscript describing the foundational mathematical model for the registry match rate projection. The manuscript will be submitted next quarter.
IIB 3 Task 4: Target Under- Repre-sented Phenotypes	**Period 4 Activity:** • Completed prototype of desktop-scale map automation software. Software is now able to incorporate BMDW participating country-specific frequencies into ESRI (Environmental Systems Research, Inc.) software and display in an easy-to-read world view map. • Continued building a comprehensive database to hold Imputation Experimentation data. Ran imputation algorithm to obtain initial data set to load into this database, and developed model of how to load the data using the BODI (Business Objects Data Integrator) tool.
IIB 3 Task 5: Bioinformatics Web Site – This task is closed.	
IIB 3 Task 6: Consultants to Improve Algorithm – This task is closed.	

IIB 3 Task 7: Population Genetics – This task is closed.	
IIB 3 Task 8: Haplotype Matching – This task is closed.	
IIB 3 Task 9: Global Haplotype/Benchmark – This task is closed.	
IIB. Rapid Identification of Matched Donors – Objective 4: Reducing the time and effort required to identify closely matched donors for patients in urgent need of HSC transplants will improve access to transplantation and patient survival in the context of a contingency response and routine patient care.	
IIB.4 Task 1: Expand Network Communications	**Period 4 Activity:** NMDP implemented the B2B components of an inventory exchange model for the following items: • B2B database schema to support inventory sharing. • B2B Gateway database schema to support transaction sharing. • Components required to share NMDP cord blood unit inventory with strategic partners, and to keep it updated. Work continues for the development of the components required to receive, search and display other Registry cord blood unit inventory.
IIB.4 Task 2: Central Contingency Management	**Period 4 Activity:** • No activity this quarter.
IIB.4 Task 3: Benchmarking Analysis – This task is closed.	
IIB.4 Task 4: Expand Capabilities of Collection and Apheresis Centers – This task is closed.	

IIC. Immunogenetic Studies – Objective 1: HLA mismatches may differ in their impact on transplant outcome, therefore, it is important to identify and quantify the influence of specific HLA mismatches. In contingency situations it will not be possible to delay transplant until a perfectly matched donor can be found.	
IIC.1 Task 1: Donor Recipient Pair Project	**Period 4 Activity:** In 1994 a retrospective D/R Pair HLA typing project to characterize class I and class II alleles of donor/recipient paired samples from NMDP's Repository was initiated. The goals of this ongoing research project are to assay the impact of DNA-based HLA matching on unrelated donor transplant outcome, develop strategies for optimal HLA matching, evaluate the impact of matching at alternative HLA loci on transplant outcome and finally to promote the development of DNA-based high resolution HLA typing methodologies. Presence/absence typing of 14 KIR loci (2DL1-5, 2DS1-5, 3DL1-3 and 3DS1) has been included. • RFQ #C11-0019, Immunogenetic Testing of Donor/Recipient Pair Samples, was released February 14, 2011. • Final analysis of the RFQ responses was completed by March 31, 2011 for inclusion in the upcoming SG 28 contracts. Current HLA matching guidelines for unrelated HCT recommend avoidance of mismatches only within the Antigen Binding Domain (ABD). This recommendation is based on the hypothesis that amino acid differences outside the ABD are not immunogenic. The ABD allo-reactivity assessment project will give insight into the allowable percent tolerance of matching needed outside of the ABD. • Initiated investigation of the first class II non-ABD mismatch (DRB1*140101/1454) where both alleles have been seen in the same genotype. Specific queries of the Be The Match Registry allowed for selection of ninety-nine potential donors to be typed at high resolution. 72 donors were invited to participate in the study. 21 study participants consented and submitted blood samples. Samples will be test in the next quarter.

IIC. Immunogenetic Studies – Objective 2: Even when patient and donor are HLA matched, GVHD occurs so other loci may play a role.	
IIC 2 Task 1: Analysis of non-HLA loci	**Period 4 Activity:** In 2005 a pilot study to perform high resolution KIR gene typing was launched. The primary objectives of the study were to move technology forward from the current practice of locus level typing to high resolution typing, disseminate information and protocols in an open source mechanism and develop reference lines for use in individual laboratories. • 46 novel alleles were fully characterized, submitted and names received. Publication of the new IPD database containing these alleles is expected within the next year. • Preparation continued on the KIR Typing Project manuscript. The Immunobiology Project Results (IPR) database and its applications will allow for storage and analysis of all immunogenetic data collected on NMDP research samples. This database has replaced the existing HLA donor/recipient pair's database and facilitates storage and analysis of data from other immunogenetic loci (KIR, microsatellites, single nucleotide polymorphisms, etc). • Several enhancements and bug fixes were made in the development environment. • Development was completed on functionality to allow users to see the contents of allele codes. • Development was completed on a report that displays NMDP IDs and type codes per project or sample group. • During this period agreement was reached to make this integration compliant with NCI BRIDG standards. UML Modeling was begun in order to model the integration.
IIC 2 Task 2: Related Pairs Research Repository – This task is closed.	
IIC 2 Task 3: CIBMTR Integration – This task is closed.	

IID. Clinical Research in Transplantation – Objective 1: Clinical research in transplantation improves transplant outcomes and supports preparedness for a contingency response.	
IID.1 Task 1: Observational Research, Clinical Trials and NIH Transplant Center	**Period 4 Activity:** **Observational Research** • Staff continued work on various observational studies within the area of Immunobiology, GVHD and Graft Sources Working Committees. During this reporting period staff traveled to the 2011 Tandem meetings where each Working Committee held its annual meeting to review and prioritize projects/proposals. A total of 86 new proposals were received for review at the Tandem meetings. **Prospective Studies; RCI BMT** • During this quarter, follow up activities continued for donors participating in the PBSC vs. Marrow clinical trial. • Six patients were enrolled on the Adult Double Cord trial this quarter bringing the total accrual to thirty eight patients (85% complete). Staff continued to coordinate, manage data collection and monitor sites. • Activities continued on the Long Term Donor Follow up project. During this period, Survey Research Team began to receive consents back from the previously donated group and began to make scheduled follow up calls. To date they have enrolled more than 7000 donors. A second mailing was also completed to those donors we have not yet received consent in an effort to increase accrual. **Cord Blood Research** • The Duke and MD Anderson laboratory staff continued work on validating the assay methodologies to ensure consistent results were generated at both testing sites for the study investigating biomarkers associated with cord blood engraftment. o Initial statistical analysis of the validation testing results showed poor inter-laboratory reliability for all assays performed.

- Further protocol development and testing at Duke led to refinements of the testing protocol aimed at improving inter-laboratory reliability.
- The study team held a conference call to discuss the data and planned a final attempt at improving inter-laboratory reliability. Results of the analysis will be completed in the next quarter.

- The white paper detailing recommendations/guidelines for the assessment of new assays (potency or other assays) relevant to cord blood banking and/or transplantation was revised and re-submitted to Cytotherapy. The paper was accepted for publication.
- Work began on the pilot study Exchange, analysis and standardization of cord blood CD34+ cell counts using ImmPort Flow Cytometry Analysis Component (FLOCK) in an effort to assess a system for centralized flow cytometry CD34 analysis. .fcs files from 2009 and 2010 proficiency testing samples will be analyzed using FLOCK during the next quarter.
  - St. Louis and Puget Sound laboratory staff worked with the developers at ImmPort on flow file upload for inter- and intra-bank data analysis. Differences in flow instrumentation and software between the two banks proved problematic and ultimately put the project on hold until further optimization of the FLOCK software can support these differences.

NIH Transplant Center

- NMDP provided support for donor/cord blood unit identification, selection and collection for the NIH intramural unrelated donor transplant program. Activity in the last quarter was as follows:
  - 14 formal searches
  - 30 donor confirmatory typing blood sample and IDM testing requests
  - 13 cord blood unit confirmatory typing requests

	o 1 therapeutic T cell collection
IID.1 Task 2: Research with NMDP Donors – This task is closed.	
IID.1 Task 3: Expand Immuno-biology Research	**Period 4 Activity:** The CIBMTR IBWC met monthly during the quarter to discuss progress on ongoing research studies • The IBWC held its annual meeting during the 2011 BMT Tandem Meetings o Seven new proposals were accepted • The scientific director attended the BMT Tandem Meetings and EBMT Meeting and met with investigators to plan upcoming analyses and prepare manuscripts on completed studies. • One manuscript were accepted for publication: o Lujia Dong, et al., *The outcomes of family haploidentical hematopoietic stem cell transplantation in hematological malignancies are not associated with patient age* BBMT 2010 Dec 29 [Epub ahead of print] • One manuscript was re-submitted for publication: o Zaiba Shamim, et al., *Polymorphism in the Genes Encoding Human Interleukin-7 Receptor-alpha and Outcome after HCT with Matched Unrelated Donor*. Re-submitted to BBMT. • One abstract was accepted for presentation: o Katharina Fleischhauer, et al., *No apparent contribution of HLA-DPA1 to the significantly increased risk for non-relapse mortality associated with non-permissive donor-recipient HLA-DPB1 T cell epitope disparities in unrelated stem cell transplant facilitated through the National Marrow Donor Program.* Accepted for poster presentation 2011 EFI meeting. • Six abstracts were presented: o Ann Woolfrey, et al., *Evaluation of HLA matching requirements in unrelated hematopoietic stem cell transplantation for non-malignant disorders.* Oral presentation 2011 BMT Tandem Meetings o Carolyn Hurley, et al., *Scoring HLA mismatches by HistoCheck does not predict clinical outcome in HCT.* Oral presentation 2011 BMT Tandem Meetings o Takakazu Kawase, et al., *Universal role for HLA-C and KIR 2DL ligand mismatch in severe*

	acute GVHD after unrelated donor hematopoietic stem cell transplantation in Japanese and Caucasian transplant recipients: An analysis on behalf of the international Histocompatibility working group in HCT. Oral presentation 2011 BMT Tandem Meetings o Jeffrey Venstrom, et al., *Donor KIR2DS1 and KIR 3DS1 are associated with improved outcomes following unrelated allogeneic stem cell transplantation for acute myeloid leukemia.* Oral presentation 2011 BMT Tandem Meetings o Katharina Fleischhauer, et al., *Non-permissive HLA-DPB1 T-cell epitope disparities are associated with non-relapse mortality after unrelated stem cell transplantation and are not dependent on HLA-DPA1*. Oral presentation 2011 EBMT Meeting o Vanderson Rocha, et al., *Impact of matching at non-inherited maternal antigens (NIMA) on outcomes after 5/6 or 4/6 HLA mismatched unrelated cord blood transplantation for malignant hematological diseases. A matched pair analysis on behalf of Eurocord-EBMT, Netcord, NMDP and CIBMTR.* Oral presentation 2011 EBMT Meeting

ACRONYM LIST

AABB	American Association of Blood Banks	HR	High Resolution
AFA	African American	HRSA	Health Resources and Services Administration
AGNIS	A Growable Network Information System	HSC	Hematopoietic Stem Cell
AML	Acute Myelogenous Leukemia	IBWC	Immunobiology Working Committee
ABD	Antigen Binding Domain	IDM	Infectious Disease Markers
API	Asian Pacific Islander	IHWG	International Histocompatibility Working Group
ARS	Acute Radiation Syndrome (also known as Acute Radiation Sickness)	IPR	Immunobiology Project Results
ASBMT	American Society for Blood and Marrow Transplantation	ICRHER	International Consortium for Research on Health Effects of Radiation
ASHI	American Society for Histocompatibility and Immunogenetics	IND	Investigational New Drug
B-LCLs	B-Lymphoblastoid Cell Lines	IS	Information Services
BARDA	Biomedical Advanced Research and Development Authority	IT	Information Technology
BBMT	Biology of Blood and Marrow Transplant	IRB	Institutional Review Board
BCP	Business Continuity Plan	JCAHO	Joint Commission on Accreditation of Healthcare Organizations
BCPeX	Business Continuity Plan Exercise	KIR	Killer Immunoglobulin-like Receptor
BMCC	Bone Marrow Coordinating Center	MDACC	MD Anderson Cancer Center
BMDW	Bone Marrow DonorsWorld	MDS	Myelodysplastic Syndrome
BMT	Bone Marrow Transplantation	MHC	Major Histocompatibility Complex
BMT CTN	Blood and Marrow Transplant - Clinical Trials Network	MICA	MHC Class I-Like Molecule, Chain A
BODI	Business Objects Data Integrator	MICB	MHC Class I-Like Molecule, Chain B
BRT	Basic Radiation Training	MKE	Milwaukee
C&A	Certification and Accreditation	MSKCC	Memorial Sloan-Kettering Cancer Center
CAU	Caucasian	MSP	Minneapolis
CBMTG	Canadian Blood and Marrow Transplant Group	MUD	Matched Unrelated Donor
CBB	Cord Blood Bank	NCBM	National Conference of Black Mayors

CBC	Congressional Black Caucus	NCI	National Cancer Institute
CBS	Canadian Blood Service	NEMO	N-locus Expectation-Maximization using Oligonucleotide typing data
CBU	Cord Blood Unit	NHLBI	National Heart Lung and Blood Institute
CHTC	Certified Hematopoeitic Transplant Coordinator	NIH	National Institutes of Health
CIBMTR	Center for International Blood & Marrow Transplant Research	NIMS	National Incident Management System
CIT	CIBMTR Information Technology	NK	Natural Killer
CLIA	Clinical Laboratory Improvement Amendment	NLE	National Level Exercise
CME	Continuing Medical Education	NMDP	National Marrow Donor Program
CMF	Community Matching Funds	NRP	National Response Plan
COG	Children's Oncology Group	NST	Non-myeloablative Allogeneic Stem Cell Transplantation
CREG	Cross Reactive Groups	OCR/ICR	Optical Character Recognition/Intelligent Character Recognition
CSS	Center Support Services	OIT	Office of Information Technology
CT	Confirmatory Testing	OMB	Office of Management and Budget
CTA	Clinical Trial Application	ONR	Office of Naval Research
DC	Donor Center	P2P	Peer-to-Peer
DHHS-ASPR	Department of Health and Human Service – Assistant Secretary Preparedness and Response	PBMC	Peripheral Blood Mononuclear Cells
DIY	Do it yourself	PBSC	Peripheral Blood Stem Cell
DKMS	Deutsche Knochenmarkspenderdatei	PCR	Polymerase Chain Reaction
DMSO	Dimethylsulphoxide	PSA	Public Service Announcement
DoD	Department of Defense	QC	Quality control
DHHS-ASPR	Department of Health and Human Services – Assistant Secretary for Preparedness and Response	RCC	Renal Cell Carcinoma
DNA	Deoxyribonucleic Acid	RCI BMT	Resource for Clinical Investigations in Blood and Marrow Transplantation
DR	Disaster Recovery	REAC/TS	Radiation Emergency Assistance Center/Training Site

D/R	Donor/Recipient	RFP	Request for Proposal
EBMT	European Group for Blood and Marrow Transplantation		
EDC	Electronic Data Capture	RFQ	Request for Quotation
EFI	European Federation of Immunogenetics	RG	Recruitment Group
EM	Expectation Maximization	RITN	Radiation Injury Treatment Network
EMDIS	European Marrow Donor Information System	SBT	Sequence Based Typing
ENS	Emergency Notification System	SCTOD	Stem Cell Therapeutics Outcome Database
ERSI	Environment Remote Sensing Institute	SG	Sample Group
FBI	Federal Bureau of Investigation	SLW	STAR Link® Web
FDA	Food and Drug Administration		
FDR	Fund Drive Request	SSA	Search Strategy Advice
FLOCK	Flow Cytometry Analysis Component	SSO	Sequence Specific Oligonucleotides
Fst	Fixation Index	SSP	Sequence Specific Primers
GETS	Government Emergency Telecommunications Service	SSOP	Sequence Specific Oligonucleotide Probes
GCSF	Granulocyte-Colony Stimulating Factor (also known as filgrastim)	STAR®	Search, Tracking and Registry
GIS	Geographic Information System		
GvHD	Graft vs Host Disease	TC	Transplant Center
HCS	HealthCare Standard	TED	Transplant Essential Data
HCT	Hematopoietic Cell Transplantation	TNC	Total Nucleated Cell
HEPP	Hospital Emergency Preparedness Program	TSA	Transportation Security Agency
HHQ	Health History Questionnaire	UI	User Interface
HHS	Health and Human Services	UML	Unified Modeling Language
HIPAA	Health Insurance Portability and Accountability Act	URD	Unrelated Donor
HIS	Hispanic	WGA	Whole Genome Amplification
HLA	Human Leukocyte Antigen	WMDA	World Marrow Donor Association
HML	Histoimmunogenetics Mark-up Language	WU	Work-up